UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,385	07/24/2006	Erik Gosuinus Petrus Schuijers	NL040085	1288

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER
OPSASNICK, MICHAEL N

ART UNIT	PAPER NUMBER
2626	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _24 July 2006_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-27_ is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-27_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _24 July 2006_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☒ All   b)☐ Some * c)☐ None of:
         1.☐ Certified copies of the priority documents have been received.
         2.☐ Certified copies of the priority documents have been received in Application No. _____.
         3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because it contains an embedded hyperlink and/or other

form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or

other form of browser-executable code. See MPEP § 608.01.

The following guidelines illustrate the preferred layout for the specification of a utility
application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include
the following sections in order. Each of the lettered items should appear in upper case, without
underlining or bold type, as a section heading. If no text follows the section heading, the phrase
"Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
        DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
        COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
        (1) Field of the Invention.
        (2) Description of Related Art including information disclosed under 37 CFR 1.97
        and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence
        Listing" is required on paper if the application discloses a nucleotide or amino
        acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence
        Listing" is not submitted as an electronic document on compact disc).

2.   The abstract of the disclosure is objected to because the abstract needs to be submitted on

a separate page, without extraneous information. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Goodwin</u>

<u>(US2003/0093282)</u> in view of <u>Malvar (6496795)</u>.

As per claims 1,2,26,27, <u>Goodwin (US2003/0093282)</u> teaches a decoder comprising

means for recovering a plurality of first spectral coefficients from a received signal, the first

spectral coefficients comprising the products of first transform means; inverse transform means

for transforming said first spectral coefficients into one or more time domain signal components;

second transform means for transforming said one or more time domain signal components into a

plurality of second spectral coefficients (as inverse MDCT from a decoder – fig 1, subblock 24

and MDCT,OLA synthesis window - fig. 1, subblock 28), the decoder further comprising means

for processing one or more of said first spectral coefficients in conjunction with a respective

second spectral coefficient (as second set of coefficients in the MDCT OLA calculation – Fig. 1,

subblock 28);

As per claims 1,2,26,27, Goodwin (US2003/0093282) does not explicitly teach wherein,

the modulation of said second transform means is orthogonal to the modulation of said first

transform means at corresponding modulation frequencies, however, Malvar (6496795) teaches

orthogonal functions (col. 8 lines 5-50). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify the transform of Goodwin

to be an orthogonal type function because it would advantageously provide more efficiency in

localized frequency decomposition (Malvar (6496795), col. 8 lines 50-55).

As per claim 3, the combination of Goodwin (US2003/0093282) in view of Malvar

(6496795) teaches a decoder as claimed in claim 2, wherein said first spectral coefficients

comprise the output of a critically sampled forward frequency transform, said critically sampled

forward frequency transform employing a 50% overlap in data samples to be transformed

(Goodwin (US2003/0093282), as overlap add function which can include 50%, para0085).

As per claims 4,5,25, the combination of Goodwin (US2003/0093282) in view of Malvar

(6496795) teaches a decoder as claimed in claim 2, wherein one of said first forward frequency

transform and said second forward frequency transform comprises the Modified Discrete Cosine

Transform (MDCT), the other comprising the Modified Discrete Sine Transform (MDST), and

the inverse as well (Malvar (6496795), MDCT – col. 8 lines 45-55 - modified sin/cos function).

As per claim 6, the combination of Goodwin (US2003/0093282) in view of Malvar (6496795) teaches a decoder as claimed in claim 2, wherein one or more windowing and overlap-add operations are performed on said time domain signal components before said one or more second forward frequency transforms (Goodwin (US2003/0093282), as OLA performed before the DFT – fig. 1, subblocks 26-28-30).

As per claims 7-10, the combination of Goodwin (US2003/0093282) in view of Malvar (6496795) teaches means for delaying said first spectral coefficients so that each first spectral coefficient is synchronized with the respective corresponding second spectral coefficient, as well as aliasing reduction of first and second spectral coefficients (Goodwin (US2003/0093282), as offsetting aliasing – pg 6, para 0083-0085; as well as well known butterfly techniques in FFT – page 7, para 0088-0089)

As per claims 11, 12,16,19, the combination of Goodwin (US2003/0093282) in view of Malvar (6496795) teaches wherein each first spectral coefficient and respective second spectral coefficient together comprise a complex-valued spectral coefficient, the decoder further including means for performing one or more complex-valued inverse frequency transforms on said complex-valued spectral coefficients to produce a plurality of data samples; means for applying one or more types of window functions to said data samples to produce a plurality of windowed data samples; and means for constructing an output signal from said windowed data samples, as well as on a granule level (Goodwin (US2003/0093282), as complex inverse transform – page 6, para 0078-0082)

As per claims 13,17, the combination of Goodwin (US2003/0093282) in view of Malvar (6496795) teaches a decoder as claimed in claim 11, wherein said output signal constructing

means applies one or more overlap-add operations to said windowed data samples to produce

said output signal (Goodwin (US2003/0093282), overlap add – page 6, para 0085).

As per claim 14, the combination of Goodwin (US2003/0093282) in view of Malvar

(6496795) teaches a decoder as claimed in claim 11, wherein, in respect of at least said first type

of window function, said window function application means is arranged to apply a single

window function to all data samples produced in respect of a respective set of complex-valued

spectral coefficients. (Goodwin (US2003/0093282) as analysis windows – fig. 1, subblock

28,30)

As per claims15,18, the combination of Goodwin (US2003/0093282) in view of Malvar

(6496795) teaches a decoder as claimed in claim 11, wherein said at least first type of window

function includes length adjusted versions of MPEG-1 layer III type 0, type 1 and type 3 window

functions (Goodwin (US2003/0093282), page 1, para 0008)

As per claim 20,24, the combination of Goodwin (US2003/0093282) in view of Malvar

(6496795) teaches a decoder as claimed in claim 19, wherein said output signal constructing

means comprises a complex exponential modulated synthesis filterbank, of which the real-valued

output components comprise said output signal (Goodwin, page 7, para 0087-0089).

As per claim 21,22, the combination of Goodwin (US2003/0093282) in view of Malvar

(6496795) teaches odd time and odd frequency modulation (Goodwin (US2003/0093282) ,

paragraphs 0061,0070,0083).

As per claim 23, the combination of Goodwin (US2003/0093282) in view of Malvar

(6496795) teaches the disclosed equations (Goodwin (US2003/0093282), page 9, para 0017).

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.   Please see related art listed on the PTO-892 form.

6.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Michael Opsasnick, telephone number (571)272-7623,
who is available Tuesday-Thursday, 9am-4pm.
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for
the organization where this application or proceeding is assigned is 571-273-8300.
        Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
applications is available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael N. Opsasnick/
Primary Examiner, Art Unit 2626
12/7/08